

Name \_\_\_\_\_ Period \_\_\_\_\_

## **UV Radiation**

### **Introduction:**

Does sunscreen actually block UV Radiation? During this lab, you are going to test the effect of various sunscreens on beads that change color when hit with ultraviolet light. You will compare beads covered with sunscreens of different SPF's to a control set of beads with no sunscreen.

What is SPF? SPF stands for Sun Protection Factor. The number is determined experimentally indoors by exposing human subjects to a light spectrum meant to mimic noontime sun. Some subjects wear sunscreen and others do not. The amount of light that induces redness in sunscreen-protected skin, divided by the amount of light that induces redness in unprotected skin is the SPF. It is mainly a measure of UVB protection and ranges from 1 to 45 or above.

A sunscreen with an SPF of 15 filters 92% of the UVB. Put another way, a sunscreen with an SPF of 15 will delay the onset of a sunburn in a person who would otherwise burn in 10 minutes to burn in 150 minutes. The SPF 15 sunscreen allows a person to stay out in the sun 15 times longer.

### **Data:**

Table 1: The Effects of Various Sunscreens on UV Beads

SPF of Sunscreen	Appearance of UV Beads
No sunscreen	
8	
15	
30	
50	

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Results:

A. How do the beads with sunscreen compare to those without sunscreen?  
(Be specific)

B. Which sunscreen appeared to work the best? Explain how you determined this.

Conclusion:

Write at least 3 sentences describing what you learned from this lab.  
Be specific. Use information from the introduction to help you as well.